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SPECIAL COLLOQUIUM ISSUE

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A Century of American Medicine 1776-1876

We have no reason to boast, or to be ashamed of what we have thus far accomplished; it has been but a little while since we have been furnished with the means of investigation needed to give our observations that accuracy and precision which alone can entitle medicine to a place among the sciences properly so called; and we may begin the new century in the hope and belief that to us applies the bright side of the maxim of Cousin, "It is better to have a future than a past."

John Shaw Billings, Asst. Surgeon
Librarian
Library of the Surgeon-General's Office
1876

Two Centuries of American Medicine 1776-1976

Dr. John Shaw Billings' projection of the future is now a part of our past.

The history of U.S. medicine is reflected in the growth of its journal literature. The first American medical journal, *Medical Repository,* was published in New York in 1797. In 1820 the *Philadelphia Journal of the Medical and Physical Sciences* was published by Dr. Nathaniel Chapman to refute the disparaging remark in the *Edinburgh Review,* "In the four quarters of the globe, who reads an American book? or goes to an American play? or looks at an American picture or statue? What does the world yet owe to American Physicians or Surgeons?" In 1876, there were 53 U.S. medical journals; today there are 6000 which contain more than one-third of the world's biomedical literature.

We borrowed heavily from our European colleagues during the first century of American medicine. During the second century, we developed the scientific base upon which the more recent American medical contributions have been shared with others. The future still contains the challenge of how best to apply this knowledge for the welfare of the individual and society.

Dr. Cummings opens the Colloquium on the Bicentennial of Medicine in the U.S.

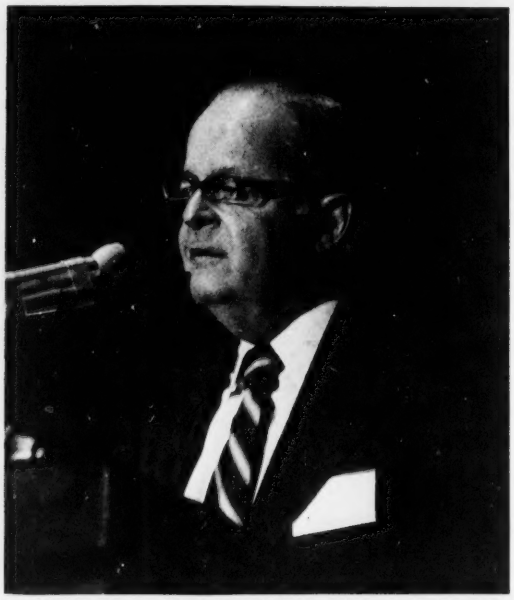
Martin M. Cummings, M.D., Director
National Library of Medicine
1976

NLM, Macy Foundation Sponsor Bicentennial Colloquium

On May 6 and 7 several hundred distinguished physicians, scientists and educators from this country and abroad gathered in the Masur Auditorium of the National Institutes of Health Clinical Center for a "Colloquium on the Bicentennial of Medicine in the United States." The Colloquium was hosted by the National Library of Medicine in cooperation with the Josiah Macy, Jr. Foundation.

Topics included medical education, public health and preventive medicine, medical care, select specialty areas, biomedical communications, the federal role in medical education and research, and U.S. medicine as seen from abroad. The essays presented were discussed first by a special discussant and then with full audience participation in the spirit of a true colloquy. A complete list of speakers, discussants, and topics follows this article. The essays are being published in a two-volume Festschrift by the Josiah Macy, Jr. Foundation (see page 10).

On the evening of May 6, a special NLM Board of Regents dinner was held in the Library. Some 225 guests attended the function, the first of its kind ever held in the Library. The main Reading Room was transformed into a banquet hall for the occasion. The guests of honor included notable figures who have played an important role in developing the Federal health effort and who have fostered NLM's programs: Health, Education, and Welfare Secretary David Mathews, Congressman Daniel Flood, former HEW Secretary Wilbur Cohen, former Senator Lister Hill, and former Surgeon General Luther L. Terry. Dr. Cummings, who presided over the dinner, presented each guest of honor with a copy of the *Selected Papers of John Shaw Billings*, edited by Dr. Frank B. Rogers, former NLM Director. Special messages were received and read from President Ford, Senator Humphrey, Senator Magnuson, and Senator Kennedy (see page 8). The principal speaker was Chairman of the Board of Regents, W. N. Hubbard, Jr., M.D., who spoke on "The Utilization of Scientific Knowledge — The Role of a Medical Library" (see page 9).



Dr. John Z. Bowers, President of the Josiah Macy, Jr. Foundation.

In his comments, Congressman Flood noted the "high regard for the dedicated and superbly competent men and women who work at NIH...the work they do is fundamental to the full realization of our inalienable right to life, liberty and the pursuit of happiness that is so much in our minds as we celebrate our bicentennial...." The Congressman said he was proud to follow in the footsteps of former Senator Lister Hill and the late Representative John Fogarty to champion "a vigorous national biomedical research effort and the effective dissemination of medical knowledge, as embodied in the programs of the research institutes and the National Library of Medicine here at NIH."

The closing lecture, "Quo Vadis, U.S. Medicine," was given by Dr. Philip Handler, President of the National Academy of Sciences, at the Smithsonian National Museum of History and Technology. This was followed by a reception-buffet.

Miss Mary E. Corning, NLM Assistant Director for Internation Programs, whose recommendations to Dr. Cummings in 1973 led to this Colloquium and Festschrift, was the coordinator of the Colloquium.

Colloquium Agenda - May 6, 1976

MODERATOR
MARTIN M. CUMMINGS, M.D.
Director
National Library of Medicine

WELCOME
DONALD S. FREDRICKSON, M.D.
Director
National Institutes of Health

INFLUENCES ON THE DEVELOPMENT OF AMERICAN MEDICINE
JOHN Z. BOWERS, M.D.
President
Josiah Macy, Jr. Foundation

THE FEDERAL GOVERNMENT IMPACT ON BIOMEDICAL RESEARCH
G. BURROUGHS MIDER, M.D.
Senior Consultant
National Library of Medicine
DISCUSSANT:
IVAN L. BENNETT, JR., M.D.
Provost of the Medical Center, and
Dean of the School of Medicine
New York University

PUBLIC HEALTH AND PREVENTIVE MEDICINE
JOHN CRAYTON SNYDER, M.D.
Professor of Population and Public Health
Harvard University School of Public Health

MEDICAL CARE
RUSSELL A. NELSON, M.D.
President Emeritus
The Johns Hopkins Hospital
DISCUSSANT:
WALSH McDERMOTT, M.D.
Special Advisor to the President
The Robert Wood Johnson Foundation

UNDERGRADUATE MEDICAL EDUCATION
JOHN A. D. COOPER, M.D.
President
Association of American Medical Colleges

GRADUATE MEDICAL EDUCATION
WILLIAM D. HOLDEN, M.D.
Oliver H. Payne Professor of
Surgery and Director of
Department, Case Western
Reserve University
School of Medicine
DISCUSSANT:
ROSEMARY A. STEVENS, Ph.D.
Professor of Public Health
Yale University

MODERATOR
WILLIAM B. BEAN, M.D.
Kempner Professor and Director
Institute for the Medical Humanities
The University of Texas Medical Branch

INFECTIOUS DISEASES (MICROBIOLOGY)
PAUL B. BEESON, M.D.
Distinguished Physician
Veterans Administration
and Professor of Medicine
University of Washington

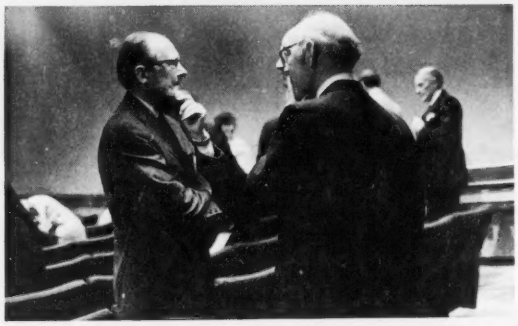
IMMUNOLOGY
LEWIS THOMAS, M.D.
President
Memorial Sloan-Kettering
Cancer Center
DISCUSSANT:
HARRY F. DOWLING, M.D.
Professor of Medicine Emeritus, University of Illinois and
Visiting Scholar, National Library of Medicine

NEOPLASIA
MICHAEL B. SHIMKIN, M.D.
Professor of Community
Medicine and Oncology
University of California, San Diego
DISCUSSANT:
JONATHAN E. RHOADS, M.D.
Professor of Surgery
School of Medicine
University of Pennsylvania

SURGICAL CARE
FRANCIS D. MOORE, M.D.
Moseley Professor of Surgery
Harvard Medical School, and
Surgeon-in-Chief
Peter Bent Brigham Hospital
DISCUSSANT:
OWEN H. WANGENSTEEN, M.D.
Regents' Professor
Department of Surgery
University of Minnesota

Board of Regents Reception and Dinner . . . . . 7:00 p.m.
Speaker: W. N. HUBBARD, JR., M.D., Chairman, Board of Regents
"THE UTILIZATION OF SCIENTIFIC KNOWLEDGE—THE ROLE OF A MEDICAL LIBRARY"
Location: National Library of Medicine

(l. to r.) Dr. Frank B. Rogers, former NLM Director; Dr. Luther Terry, former U.S. Surgeon General; HEW Secretary David Mathews; Miss Mary Corning, Colloquium Coordinator; former Senator Lister Hill; Dr. Cummings.



Dr. James V. Neel (left) and other participants during a break in the Colloquium.

Dr. W. N. Hubbard, Jr., retiring Chairman of the Board of Regents, and Miss Corning.

Dr. Cummings and former Senator Lister Hill view artist's rendition of the soon-to-be-constructed Lister Hill Center building.

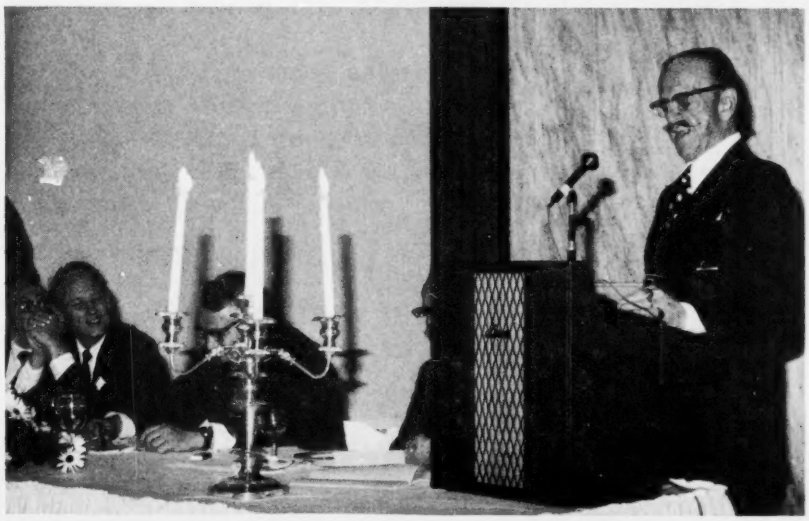
Colloquium

NIH Director, Dr. Fredrickson, reading President Ford's message to the Colloquium.

NLM's main reading room on the night of the Board of Regents dinner.

Dr. Joseph Volker, newly elected Regents Chairman, Dr. Cummings, and Dr. Walsh McDermott.

Reception at the Smithsonian. Colonel Mims C. Aultman, MC, USA, and Barbara Coe Johnson, President of the Medical Library Association, in foreground.



Congressman Daniel Flood speaking at the dinner. Seated, from the left, former HEW Secretary Wilbur Cohen, NIH Director, Dr. Donald S. Fredrickson, National Science Foundation Director, Dr. H. Guyford Stever.

Colloquium Agenda - May 7, 1976

MODERATOR
DeWITT STETTEN, JR., M.D.
Deputy Director for Science
National Institutes of Health

METABOLISM AND ENDOCRINOLOGY
GEORGE W. THORN, M.D.
Hersey Professor of the Theory
and Practice of Physic, Emeritus
Harvard Medical School
DISCUSSANT:
DONALD S. FREDRICKSON, M.D.
Director
National Institutes of Health

THE HEART AND LUNGS
JULIUS H. COMROE, JR., M.D.
Professor or Physiology
Cardiovascular Research Institute
University of California, San Francisco
DISCUSSANT
EUGENE A. STEAD, JR., M.D.
Florence McAlister Professor of Medicine
Duke University

HUMAN GENETICS
JAMES V. NEEL, M.D.
Professor of Human Genetics
School of Medicine
University of Michigan
DISCUSSANT:
VICTOR A. McKUSICK, M.D.
Chairman, Department of Medicine
The Johns Hopkins University, and
Physician-in-Chief
The Johns Hopkins Hospital

PATHOLOGY
CHANDLER A. STETSON, M.D.
Vice President for Health
Affairs, and
Dean, College of Medicine
University of Florida
DISCUSSANT:
PETER D. OLCH, M.D.
Deputy Chief, History of Medicine Division
National Library of Medicine

THE ORIGINS OF MEDICINALS
W. N. HUBBARD, JR., M.D.
President
The Upjohn Company
DISCUSSANT:
LOUIS LASAGNA, M.D.
Professor and Chairman of
Pharmacology and Toxicology
University of Rochester

MODERATOR
JOHN Z. BOWERS, M.D.
President
Josiah Macy, Jr. Foundation

THE NEUROSCIENCES
ROBERT G. FRANK, Ph.D.
Assistant Professor
Division of Medical History
School of Medicine
LOUISE H. MARSHALL, Ph.D.
Senior Editor
Brain Research Institute
H. W. MAGOUN, Ph.D.
Professor, Emeritus
Department of Psychiatry
University of California, Los Angeles

BIOMEDICAL COMMUNICATIONS
MARY E. CORNING
Assistant Director for
International Programs
MARTIN M. CUMMINGS, M.D.
Director
National Library of Medicine
DISCUSSANT:
FRANCIS O. SCHMITT, Ph.D.
Emeritus Institute Professor and
Founder and Chairman of the
Neurosciences Research Program
Massachusetts Institute of Technology

THE VIEW FROM SWEDEN
SUNE BERGSTROM, M.D.
Professor, Rector
Karolinska Institute

THE VIEW FROM THE UNITED KINGDOM
SIR GEORGE PICKERING
Regius Professor of Medicine
Emeritus, Oxford University
DISCUSSANT:
JOHN ROBERT EVANS, M.D.
President
University of Toronto

HISTORICAL SYNTHESIS
JOHN B. BLAKE, Ph.D.
Chief, History of Medicine
Division, National Library of Medicine

Closing Lecture . . . . . 8:30 p.m.
PHILIP HANDLER, Ph.D., President, National
Academy of Sciences
"QUO VADIS, U.S. MEDICINE"
Reception and Buffet . . . . . 9:30 p.m.
Location: Smithsonian Institution National Museum of
History and Technology

THE WHITE HOUSE

WASHINGTON

May 4, 1976

Americans are proud that this nation's leadership in medicine has contributed so prominently to the relief of pain, the prevention of communicable diseases and the treatment of sick and disabled individuals in our own country and throughout the world.

It is most fitting that the National Library of Medicine is hosting a special Colloquium on the Bicentennial of U.S. medicine, and I am happy for this opportunity to welcome the distinguished foreign guests and U.S. participants in this outstanding program.

Our great National Library of Medicine contains the world's published records of advances in medical science. But more than this, it uses this knowledge to provide information to all who need it for their research, education and health care services.

This Colloquium will serve both as a reflection on past accomplishments and as a bold acceptance of the challenges that lie ahead. I hope that it will be a rewarding and profitable experience for all who attend.

Gerald R. Ford

Colloquium Receives Messages from Senators Humphrey, Kennedy, and Magnuson

In addition to the letter from President Ford, messages to the Colloquium were received from three U.S. senators who have played important roles in the development of medical research programs in this country who were unable to attend. In his letter, Senator Hubert H. Humphrey of Minnesota recalled the many contributions of members of the health professions in our history. He noted the growth of the Library's collection and the importance of NLM's applying modern technology to the dissemination of biomedical information. "The quality of medical research and patient care depends on continued improvement and expansion of these activities."

Senator Edward M. Kennedy of Massachusetts sent a telegram to the Colloquium. He recalled the part played by his brother, then Senator John Kennedy, and Lister Hill in sponsoring the legislation that created a national resource — the National Library of Medicine — from the Armed Forces Medical Library. Senator Kennedy emphasized the importance of efficient and rapid dissemination of medical information. "Only when this information is utilized in the pursuit of research, education and patient care has society's patronage of science been fully repaid. Please accept my warm and high regards for this vitally important function."

Senator Warren Magnuson of Washington, in his message, said that Congress's high priority on health "has paid big dividends in terms of lives saved and an immeasurable amount of suffering prevented.... Our Federal investment in research has been most rewarding. Your host for this meeting, the National Library of Medicine, has been the world leader in providing medical library and information services." Senator Magnuson looked forward to the construction of the Lister Hill National Center for Biomedical Communication building. "This center will justifiably honor Senator Hill's contributions, which have touched the lives of many people in the United States."

One Focus of the Colloquium: Information and Communications

The presentations at the Colloquium covered a wide range of health-related topics. Of special interest to medical librarians is the paper on "Biomedical Communications" by Mary E. Corning and Martin M. Cummings, M.D., printed in Volume II of *Advances in American Medicine* (see page 10). The following is excerpted from the essay's concluding section, "Future Issues":

> There is a need to reexamine the information dissemination (communications) process, taking into account the relative roles of the author, the publisher, the library, the user, and the impact of the federal government and of technology. Federal funding in the United States has provided major support for research, development, publications, page charges, information systems, and libraries. Issues that remain unresolved are copyright, the proliferation of specialty journals, compatible networking, and the relative roles of the federal, private, profit, and nonprofit sectors....
>
> Within the next several decades medical information will be transmitted with great speed and accuracy to a physician located anywhere on this earth and perhaps on the other planets. The major difficulty will be the selection of the most appropriate information to solve the problem at hand. Medical educators must find new means to teach students where and how to get the information they need, rather than attempt to force them to memorize the huge amount of data encompassed by medicine. Man's brain, remarkable and versatile as it is, will not be capable of acquiring and retaining the vast amount of new knowledge generated by the biomedical sciences....
>
> Two hundred years of medicine in the United States have produced a wealth of new knowledge which no other comparable period of past history has equalled. Yet man still faces starvation, acute and chronic illnesses,

diseases resulting from poisons and living agents, mental disorders, and psychosocial malaise. With innocence, ignorance, and thoughtlessness we have so disturbed our environment that we generate new medical problems at a rate equal to those we can solve. Is it our fate to continue in this self-defeating mode, or will future generations learn sufficiently from our past experiences to restore the ecological balance and produce a world that is productive, healthy, and peaceful? This is the challenge of the next century.

A second presentation of special interest to those in the health information field is Dr. Hubbard's paper, "The Utilization of Scientific Knowledge — The Role of a Medical Library," delivered at the Board of Regents' dinner on the evening of May 6. Excerpts follow.

I propose that there are three broad realms in which scientific knowledge is used and which correspond roughly to the motivations for scientific inquiry. The medical library must address itself to each of these and do so in the terms of the user group. The three realms are, first, natural philosophy, then practical application, and finally public policy.

The first realm of natural philosophy is the one in which knowledge, like virtue, is its own reward. The motivation for the acquisition and use of knowledge in this realm is the personal interest and curiosity of the individual inquirer....

The second realm is distinguished by knowledge being applied in order to influence events. The most widespread example of this practical application of scientific knowledge is the process of education....The application of scientific knowledge that has attracted both the broadest admiration and the most general aversion is the translation of knowledge into technology. The working assumption that anything that can be done in scientific technology should be done has seemed increasingly inappropriate in recent times; but how to have social constraints without impeding the freedom of inquiry that is essential to improved understanding is not yet clear.

The third realm — the utilization of scientific knowledge in public policy — is the most recent, and to me, the most disturbing. Scientific knowledge is the basis of great power in advocacy.... When the scientist becomes an advocate for public policy he *does* fulfill a citizen's responsibility to confront the social relevance of his scientific experience; but as an advocate he relinquishes the objectivity and relative freedom from conflicting values that distinguish scholarly inquiry. The nonscientist who usually has the responsibility for decision may not clearly distinguish between scientific advocacy and scientific understanding....The importance of a balance of power in this utilization of scientific knowledge as a tool of advocacy implies the need for widespread and equal access of all interested persons to scientific descriptions and understanding....

The role of the medical library in this problem of equal access to scientific information applied to public policy is the most difficult, the most intimidating, and yet, for the future, probably the most important of the realms of use of knowledge that the medical library should serve. It is an inquiry of the highest order of importance to determine how the library can better fit this new mode of scientific information use. The role of the library is of course to serve the purposes of all three realms of utilization of scientific knowledge, but in doing so it must aim to break the walls between them.

NATIONAL LIBRARY OF MEDICINE
NEWS

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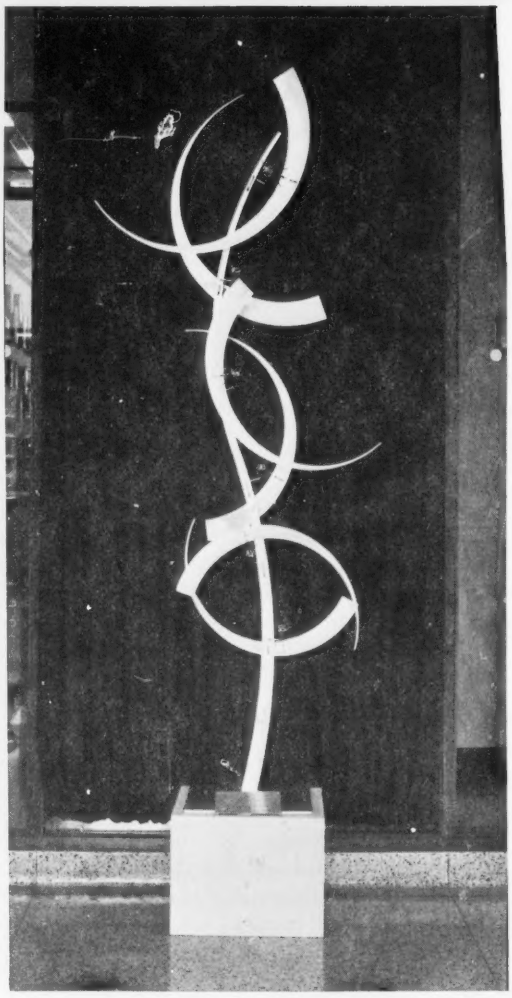
Publications on the Colloquium

The passage by John Shaw Billings quoted on page 1 is taken from "Literature and Institutions," one of five essays published at the nation's centennial in a volume titled: *A Century of American Medicine, 1776-1876.* One hundred years later, in honor of the U.S. bicentennial, the National Library of Medicine and the Josiah Macy, Jr. Foundation have cooperated to publish *Advances in American Medicine: Essays at the Bicentennial.*

The two-volume Festschrift includes the essays of 22 men and women presented at the Colloquium on the bicentennial of U.S. medicine. The essays are printed in their entirety, each author describing the development of his field from its beginnings to the present, with emphasis on the last one hundred years, citing the most important breakthroughs and the individuals responsible for them.

Advances in American Medicine: Essays at the Bicentennial, edited by John Z. Bowers, M.D., and Elizabeth F. Purcell, is distributed by the Independent Publishers Group, 60 East 55th Street, New York, N.Y. 10022. The two volumes total 900 pages and cost $25.

Three special presentations at the Colloquium, not included in the above volumes, will be published later this year by the Library. The first is the after-dinner talk on the evening of May 6 by W.N. Hubbard, Jr., M.D., Board of Regents Chairman and President of the Upjohn Company, on the subject, "The Utilization of Scientific Knowledge — The Role of a Medical Library." John B. Blake, Ph.D., presented a paper at the end of the Colloquium that synthesized the essays from the perspective of a historian. The third is the Colloquium's closing lecture, given at the reception at the Smithsonian Institution by Philip Handler, Ph.D., President of the National Academy of Sciences, "Quo Vadis, U.S. Medicine." *News* readers will be notified when the volume is available.



West coast sculptor Jerome Kirk designed this aluminum kinetic sculpture which was commissioned and presented to the Library by Dr. Cummings and Miss Corning "on the occasion of the Bicentennial of U.S. medicine." The sculpture's curved elements are finely balanced to move in varying, pendular ways with changing air currents, creating "infinite patterns." The choice of a dynamic design reflects the moving spirit of medicine, and more particularly that of biomedical communications. The sculpture stands in the center of the Card Catalog Room.